

### ABSTRACT OF THE DISCLOSURE

A method for measuring a steering angle of a steering shaft for a vehicle uses a first rotatable body that rotates together with the steering shaft at an  $r_1$  ratio and a second rotatable body that rotates together with the steering shaft at an  $r_2$  ratio. An absolute rotational angle of the first rotatable body,  $\Psi$ , can be expressed as  $\Psi' + i\Omega$ , and an absolute rotational angle of the second rotatable body,  $\theta$ , can be expressed as  $\theta' + i\Omega$ .  $\Psi'$  and  $\theta'$  are measured using an angle sensor having a measurement range of  $\Omega$ . To obtain the steering angle  $\Phi$  of the steering shaft, measurement values  $\Psi'_M$  and  $\theta'_M$  of  $\Psi'$  and  $\theta'$  are obtained. A plurality of  $\theta'$ 's corresponding to the  $\Psi'_M$  value are calculated from a relation between  $\Psi'$  and  $\theta'$  to yield a  $\theta'_C$ . By comparing the  $\theta'_M$  to the  $\theta'_C$ , an  $i$ -value of the first rotatable body is obtained. The obtained  $i$ -value is then used to obtain an absolute rotational angle  $\Psi$  of the first rotatable body. Finally, from a relation between  $\Psi$  and  $\theta$ , the steering angle  $\Phi$  of the steering shaft is obtained.